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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/092,977	03/30/2005	Masaaki Fujii	060326-5020-02	7008

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EXAMINER	
PHAM, EMILY P	

ART UNIT	PAPER NUMBER
2809	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/092,977	FUJII, MASAAKI	
	Examiner	Art Unit	
	Emily P. Pham	2809	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/30/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/316152.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/30/06*. & 3/10/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 11/30/2006 and 3/30/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Independent claims 1, 2, 3, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano et al. (U.S. Patent 5,905,362).

4. Regarding independent claim 1:

Nagano et al (Fig 1 and 2; column 3, lines 29-47) disclose a battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a battery cell is in a charged state or not based on at least a charge voltage or a charge current of the battery cell (Fig 1, items 10); a control circuit for controlling feeding of electric power to the battery cell according to an output of the charge detection circuit (Fig 1, items 103, 104, 105, and 106); and a setting circuit for setting a

level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to control information (Fig 1, item 101).

5. Regarding independent claim 2:

Nagano et al. (Fig 1 and 2; column 3, lines 29-47). disclose a battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a battery cell is in a charged state or not based on at least a charge voltage or a charge current of the battery cell (Fig 1, items 10), a control circuit for controlling feeding of electric power to the battery cell according to an output of the charge detection circuit (Fig 1, items 103, 104, 105, and 106); a control information generation circuit for generating control information based on an external signal fed in directly from outside (Fig 1, item 30); and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit (Fig 1, item 101).

6. Regarding independent claim 3:

Nagano et al. (Fig 1 and 2; column 7, lines 52-67; column 8, lines 1-22) disclose a battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a battery cell is in a charged state or not based on at least a charge voltage or a charge current of the battery cell (Fig 1, items 10); a control circuit for controlling feeding of electric power to the battery cell according to an output of the

charge detection circuit (Fig 1, items 103, 104, 105, and 106); a control information generation circuit for generating control information by converting an analog external signal fed in directly from outside into digital data (Fig 1, items 30 and 10); and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit (Fig 1, item 101).

7. Regarding independent claim 4:

Nagano et al. (Fig 1 and 2; column 4, lines 30-67; column 5, lines 1-67; column 6, lines 1-67; column 7; lines 1-28) disclose a battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a battery cell is in a charged state or not based on at least a charge voltage or a charge current of the battery cell (Fig 1, items 10); a control circuit for controlling feeding of electric power to the battery cell according to an output of the charge detection circuit (Fig 1, items 103, 104, 105, and 106); a control information generation circuit for generating control information based on an output result of the control circuit (Fig 1, item 30); and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit (Fig 1, item 101).

8. Regarding independent claim 5:

Nagano et al. (Fig 1 and 2; column 4, lines 30-67; column 5, lines 1-67; column 6, lines 1-67; column 7; lines 1-28) disclose a battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the battery cell (Fig 1, items 10); a control circuit for controlling feeding of electric power to the battery cell according to an output of the charge detection circuit (Fig 1, items 103, 104, 105, and 106); a detection circuit, provided within the charge control device, for detecting a state of the charge control device; a control information generation circuit for generating control information based on a signal outputted from the detection circuit (Fig 1, item 30); and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit (Fig 1, item 101).

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claim 1, 2, 3, 4, and 5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Fujii (U.S. Patent No. 6,894,458). Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference in components does not keep the charge control device from performing the same function.

11. Regarding independent claim 1:

The conflicting claims of both Fujii application and Fujii U.S. Patent recite a

charge control device comprising: a charge detection circuit; a control circuit; and a setting circuit. Although the conflicting claims are not identical, they are not patentably distinct from each other. Fujii application does not claim a charge control device having a storage circuit. Fujii U.S. Patent claims a charge control device having a storage circuit that stores control information then feeds it without modification to setting circuit. The presence of storage circuit limitation does not provide any evidence for a functional difference between the charge control device claimed by Fujii application and the one claimed by Fujii U.S. Patent.

12. Regarding independent claim 2:

The conflicting claims of both Fujii application and Fujii U.S. Patent recite a charge control device comprising: a charge detection circuit, a control; and a setting circuit. Fujii application claims a control information generation circuit that performs a function similar to the function of storage circuit claimed by Fujii U.S. Patent, both circuits store the information of voltage/current level.

13. Regarding independent claim 3:

The conflicting claims of both Fujii application and Fujii U.S. Patent recite a charge control device comprising: a charge detection circuit, a control; and a setting circuit. Fujii application recites a control information generation circuit that performs a function similar to the function of storage circuit claimed by Fujii U.S. Patent, both circuits store the information of voltage/current level. The difference of limitation

(source of control information) recited by conflicting claims does not contribute any significant variation to the critical performance of the claimed subject matters (charge control device) to make them distinct from each other. Fujii application claims a control information generation circuit for generating control information by converting an analog external signal fed in directly from outside into digital data. Fujii U.S. Patent claims a storage circuit for storing control information. Nagano et al. (U.S. Patent 5,905,362) teach that a microcomputer can be designed to convert an analog data into digital data (column 11, lines 14-27). It would have been obvious to one having ordinary skill in the art at the time the invention is made to select a microcomputer with storage ability and A/D converting ability to create the same subject matter claimed by Fujii application.

14. Regarding independent claim 4:

The conflicting claims of both Fujii application and Fujii U.S. Patent recite a charge control device comprising: a charge detection circuit, a control; and a setting circuit. Fujii application recites a control information generation circuit that performs a function similar to the function of storage circuit recited by Fujii U.S. Patent, both circuits store the information of voltage/current level. The difference of limitation (source of control information) recited by conflicting claims does not contribute any significant variation to the critical performance of the claimed subject matters (charge control device) to make them distinct from each other.

15. Regarding independent claim 5:

The conflicting claims of both Fujii application and Fujii U.S. Patent recite a charge control device comprising: a charge detection circuit, a control; and a setting circuit. Fujii application recites a control information generation circuit that performs a function similar to the function of storage circuit described by Fujii U.S. Patent, both circuits store the information of voltage/current level. The difference of limitation (source of control information) recited by conflicting claims does not contribute any significant variation to the critical performance of the claimed subject matters (charge control device) to make them distinct from each other.

Examined Application 11092977 **Claims 1-5**	**Reference U.S. Patent No. 6,894,458** **Claim 1**
1. A battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the charge detection circuit; and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state <u>according to control information fed in directly from outside.</u>	1. A charge control device comprising: a full charge detection circuit for checking whether a secondary cell is in a fully charged state or not based on a charge voltage and/or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the full charge detection circuit; <u>a storage circuit for storing control information</u>; and a setting circuit for setting a level of the charge voltage and/or the charge current at which the full charge detection circuit recognizes the fully charged state <u>according to the control information read from the storage circuit, wherein the control information is fed into the storage circuit from outside.</u>

2. A battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the secondary cell, a control circuit for controlling feeding of electric power to the secondary cell according to an output of the charge detection circuit; a control information generation circuit for generating control information based on an external signal fed in directly from outside; and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit.	1. A charge control device comprising: a full charge detection circuit for checking whether a secondary cell is in a fully charged state or not based on a charge voltage and/or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the full charge detection circuit; a storage circuit for storing control information; and a setting circuit for setting a level of the charge voltage and/or the charge current at which the full charge detection circuit recognizes the fully charged state according to the control information read from the storage circuit, wherein the control information is fed into the storage circuit from outside.

3. A battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the charge detection circuit; a control information generation circuit for generating control information by converting an analog external signal fed in directly from outside into digital data; and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit.	1. A charge control device comprising: a full charge detection circuit for checking whether a secondary cell is in a fully charged state or not based on a charge voltage and/or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the full charge detection circuit; a storage circuit for storing control information; and a setting circuit for setting a level of the charge voltage and/or the charge current at which the full charge detection circuit recognizes the fully charged state according to the control information read from the storage circuit, wherein the control information is fed into the storage circuit from outside.

4. A battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the charge detection circuit; a control information generation circuit for generating control information based on an output result of the control circuit; and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit.	1. A charge control device comprising: a full charge detection circuit for checking whether a secondary cell is in a fully charged state or not based on a charge voltage and/or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the full charge detection circuit; a storage circuit for storing control information; and a setting circuit for setting a level of the charge voltage and/or the charge current at which the full charge detection circuit recognizes the fully charged state according to the control information read from the storage circuit, wherein the control information is fed into the storage circuit from outside.

5. A battery pack employing a charge control device, comprising: a charge detection circuit for checking whether a secondary cell is in a charged state or not based on at least a charge voltage or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the charge detection circuit; a detection circuit, provided within the charge control device, for detecting a state of the charge control device; a control information generation circuit for generating control information based on a signal outputted from the detection circuit; and a setting circuit for setting a level of the charge voltage or the charge current at which the charge detection circuit recognizes the charged state according to the control information outputted from the control information generation circuit.	1. A charge control device comprising: a full charge detection circuit for checking whether a secondary cell is in a fully charged state or not based on a charge voltage and/or a charge current of the secondary cell; a control circuit for controlling feeding of electric power to the secondary cell according to an output of the full charge detection circuit; a storage circuit for storing control information; and a setting circuit for setting a level of the charge voltage and/or the charge current at which the full charge detection circuit recognizes the fully charged state according to the control information read from the storage circuit, wherein the control information is fed into the storage circuit from outside.

Allowable Subject Matter

16. No claim is allowed per 35 U.S.C. 102(b) and nonstatutory obviousness-type double patenting.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Nagano et al. (U.S. 6,225,783)
- Koike et al. (U.S. 6,275,006)
- Nagai et al. (U.S. 6,066,939)
- Kim (U.S. 5,672,953)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily P. Pham whose telephone number is (571) 270-3046. The examiner can normally be reached on 4/10..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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